Hight Speed Thermal Printhead (8dots / mm)

SE2003-DC90A

High speed, high quality, and high durability are achieved by using step free structure with high performance partial glaze and highly conductive overcoat layer. SE200*-DC90A series are lined up which can accommodate with all types of barcode labeling printers from Direct to Thermal Transfer, normal to high speed (over 300mm/s).

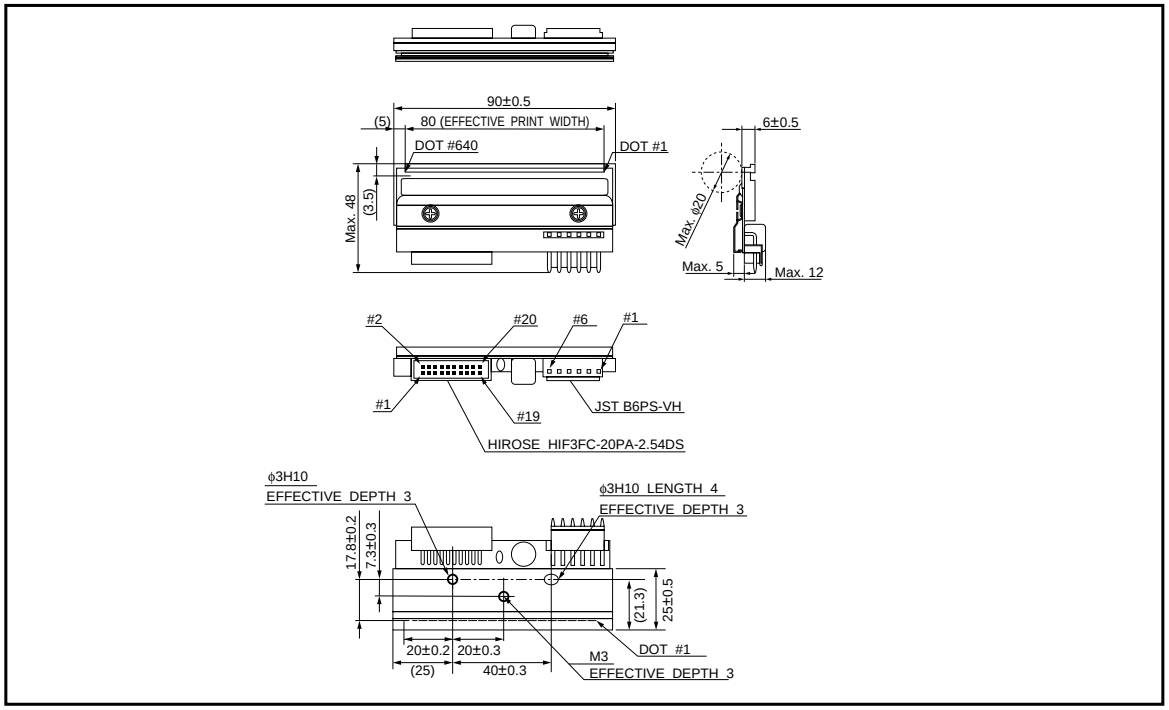
●Applications

Bar code label printers
Ticket printers
General purpose compact printers

●Features

1) ROHM new technology “STEP FREE” structure will provide, high corrosion resistance, better resistance against scratching damage, high efficiency.
2) Standard glazed components to accommodate thick paper.
3) High speed clock (10MHz) to facilitate external heat history control.
4) Using a hard conductive film as a protective film on the heating element offers excellent resistance to electrostatic damage.
5) Compatible with the SE3003-DC90A 300dpi in mechanical specifications, to facilitate the making of a series of printers.

●External dimensions (Unit : mm)



Note: No heat history control function inside the thermal printhead. External heat history control is required for high speed printing.

●Characteristics

Parameter	Symbol	Typical	Unit
Effective printing width	–	80	mm
Dot pitch	–	0.125	mm
Total dot number	–	640	dots
Average resistance value	Rave	550	Ω
Applied voltage	V_H	24	V
Applied power	P_O	0.899	W / dot
Print cycle	SLT	0.42	ms
Maximum number of dots energized simultaneously	–	448	dots
Maximum clock frequency	–	10	MHz
Maximum roller diameter	–	20	mm
Running life / pulse life	–	50 / 10^8	km / pulses
Operating temperature	–	5 to 45	°C

●Pin configuration

HIROSE

No.	Circuit	No.	Circuit
1	V_{DD}	2	BEO
3	GND	4	DI2
5	N.C.	6	CLK
7	$\overline{LA}$	8	GND
9	GND	10	DI1
11	N.C.	12	GND
13	V_{DD}	14	$\overline{STB2}$
15	$\overline{STB1}$	16	TM
17	TM	18	SENS1
19	SENS2	20	SENS3

JST

No.	Circuit
1	VH
2	VH
3	VH
4	GND
5	GND
6	GND

●**Timing chart**

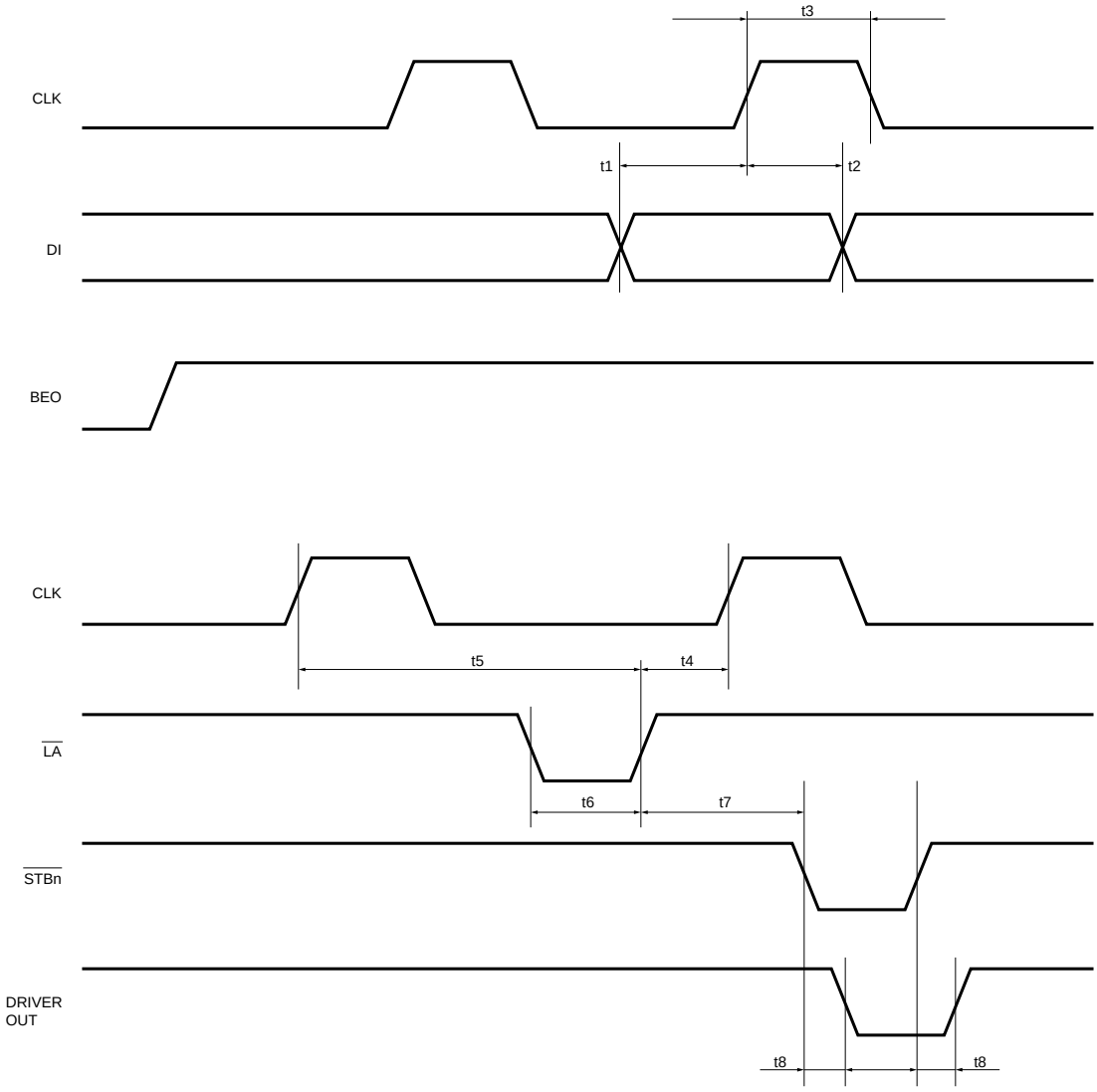
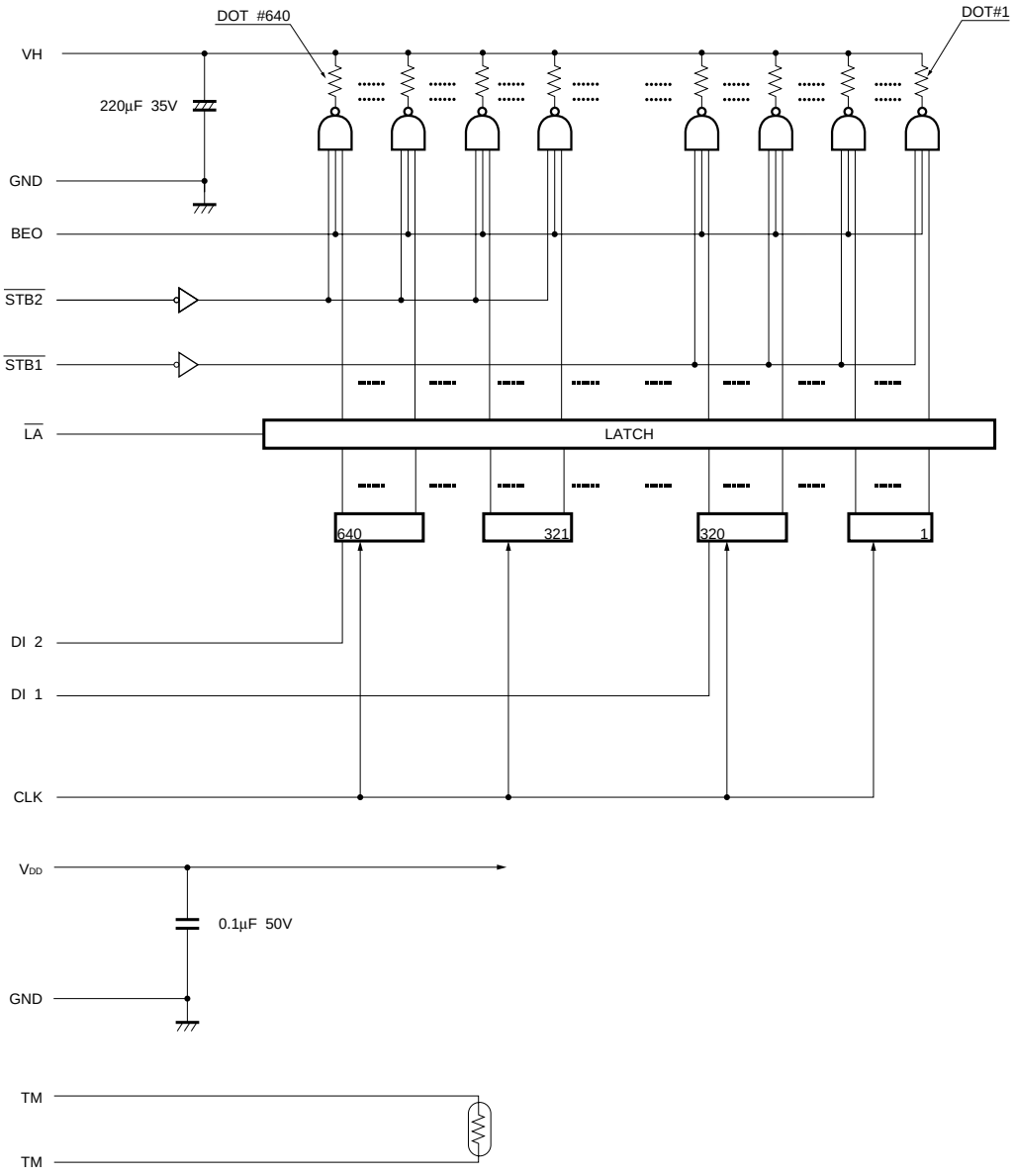


Fig.1

●**Equivalent circuit**



DI No.	DOT No.
DI 2	640 to 321
DI 1	320 to 1

$\overline{\text{STB}}$ No.	DOT No.
$\overline{\text{STB 2}}$	640 to 321
$\overline{\text{STB 1}}$	320 to 1

Fig. 2

●**Electrical characteristics curves**

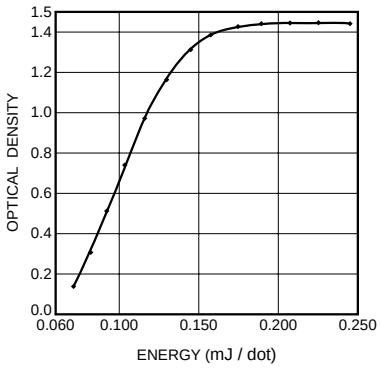


Fig. 3 Representative density curve

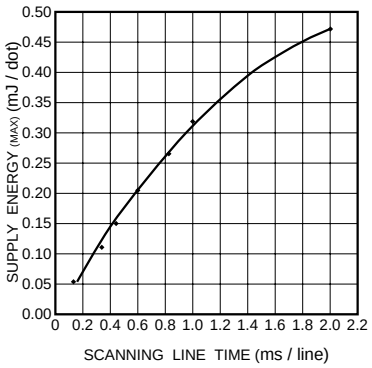


Fig. 4 Maximum energy curve

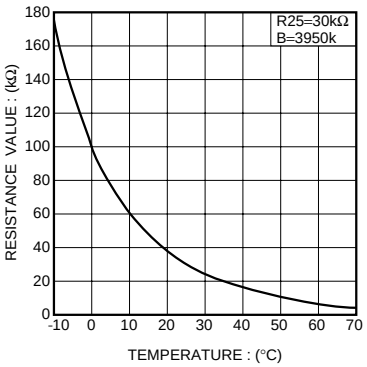


Fig. 5 Thermistor curve

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